Federal Agency Report Under Executive Order 13158 on

Marine Protected Areas

Fiscal Years 2005 - 2006

National Oceanic and Atmospheric Administration, National Marine Protected Areas Center, Silver Spring, Maryland

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INTRODUCTION

The past two decades have witnessed an increase in the use of marine protected areas (MPAs) as a conservation and management tool to protect the nation's vital natural and cultural marine resources. MPAs in the United States are currently created and managed by a myriad of agencies and programs at all levels of government with diverse conservation objectives. In response to this trend, Presidential Executive Order 13158 directs the National Marine Protected Areas Center, located within the National Oceanic and Atmospheric Administration (NOAA), to work with the Department of the Interior and other agencies and stakeholders to develop an effective, integrated, science-based national system of MPAs. Such a national system is needed to better coordinate management activities among the hundreds of federal, state, territorial, and tribal MPA authorities with sites in U.S. waters.

The Executive Order calls for each federal agency that is required to take actions under the Order to prepare a public report. This report is a summary of the actions taken to implement the Order across the federal agencies in fiscal years (FY) 2005-06. For more detailed information on additional activities undertaken by the MPA Center to implement the order, visit http://www.mpa.gov.

DEVELOPING A FRAMEWORK FOR THE NATIONAL SYSTEM OF MPAS

The MPA Center and the Department of the Interior, in cooperation with other federal, state, territorial and tribal partners and stakeholders have developed a *Draft Framework for Developing the National System of MPAs*. The first effort of its kind in the nation, the draft framework provides comprehensive national goals and flexible guidance for partnership efforts among all levels of government and stakeholders to develop an effective national system. It proposes guidance for how existing MPA sites, programs, and stakeholders can better work together to share information and coordinate their MPA management efforts, develop the necessary scientific information to make more informed management decisions, and improve the stewardship and effectiveness of existing MPAs.

The national system aims to increase the efficient protection of U.S. marine resources by enhancing cooperation among government agencies, helping to sustain fisheries and maintain healthy marine ecosystems for tourism and recreation businesses, preserving cultural resources important to the nation's maritime history, and improving public access to scientific information about the nation's marine resources. The draft framework was released for public comment in September 2006 for a 145-day public comment period (ending February 14, 2007), and the final framework is anticipated to be published in late 2007.

The initial national system, based on existing MPA sites and programs, is expected to be completed in late 2007 or early 2008. Subsequent efforts, driven by partners and stakeholders, will identify shared needs for improving the effectiveness of existing MPAs and evaluate the need for future MPAs through cooperative planning and gap analysis at regional or ecosystem levels.

Throughout FY 2005 and 2006, the MPA Center continued its collaborative efforts to engage and inform the nation on the development of the draft framework for the national system of MPAs. The MPA Center held dozens of meetings with stakeholders to gather input, including five public dialogue sessions. These dialogue sessions were held for the regions surrounding Washington, D.C.; Portland, Maine; New Orleans; San Francisco; and Seattle. In FY 2005 and 2006, the MPA Center held one workshop for federal agencies; three state regional workshops in St. Petersburg, Chicago, and Tiburon, California; and one tribal meeting to gather input on national system development.

ANALYSIS OF PLACE-BASED MARINE MANAGEMENT IN THE U.S.

Marine Managed Areas Inventory

Since 2001, a variety of federal, state, and territorial agencies have been helping the MPA Center to collect comprehensive information about the nation's marine managed areas (MMAs). While some data are still being compiled, the initial federal and state/territory data collection process has been completed. The MPA Center has begun a thorough analysis of the existing data and has published some initial results that provide a revealing picture of the nation's conservation areas. The data show that there are more than 1,500 MMAs established in the United States, managed by more than 100 federal, state or territorial government agencies. Most MMA sites (90 percent) permit multiple uses, such as fishing and boating. While federal MMA sites are generally larger, the majority of MMAs are established and managed by state agencies, and most of the sites are permanent and provide year-round protection. Finally, the majority of existing MMAs were established after 1970. In 2006, a brief summary report of the national analysis was completed, and is posted at www.mpa.gov . More detailed national and regional analyses on the status and trends of MMAs will be published in 2007.

Federal Non-Conservation Closed Areas Inventory (de facto MMAs)

The MPA Center, with support from the NOAA Coral Reef Conservation Program, completed an unprecedented inventory of marine areas in which access is federally restricted for reasons other than conservation. Because this wide variety of safety and security zones directly controls where, how, and when people can use certain ocean areas, these de facto MMAs represent a critical component of comprehensive spatial management of marine ecosystems in U.S. waters. GIS boundary data are available for all but 25 of these 1,238 sites. A complete report on the status of *de facto* MMAs will be published in 2007.

WEST COAST PILOT PROJECT

The West Coast region – California, Oregon, and Washington – is at the forefront of federal, state and tribal MPA activity and has a growing interest in place-based marine ecosystem management. For these reasons, the MPA Center is leading an initiative to pilot some of the key ecosystem based methods and approaches for designing and managing an effective regional system of MPAs on the West Coast. Working closely with state and federal MPA programs, tribes and stakeholder groups in the region, this effort is developing, testing and applying analytical tools and using the best information, to more effectively use MPAs as a means to maintain healthy, sustainable marine ecosystems and protect elements of the nation's maritime heritage. This multi-year endeavor, and the lessons it offers for other regions, will serve as a basis for planning and building a comprehensive national system that meets regional needs to conserve natural heritage, cultural heritage and sustainable production.

Key accomplishments of this project have included:

- *Human Use Patterns* - An expert workshop was held in December 2005 in Monterey, California to gather perspectives for a methodology to document patterns of human use of ocean areas for MPA planning at regional and local scales. The workshop brought together social scientists, geographers, and GIS specialists from government agencies, universities, and non-governmental organizations with expertise in characterizing human use patterns in the marine environment with the aid of GIS tools. In addition, a directory of secondary data sources pertaining to human use patterns has been compiled for the West Coast. Currently, work is underway in conjunction with the California Marine Life Protection Act Initiative to refine and enhance this directory for California state waters.

- *Cultural Resource Characterization* - the MPA Center and the U.S. Fish and Wildlife Service co-hosted a federal agency workshop in December 2005 in Arlington, Virginia, including the National Marine Sanctuary Program and the National Park Service, to identify important data needs for cultural resource management. The results of this workshop will help inform the development of data sets and management tools necessary for building a national system of MPAs. The MPA Center also completed an initial analysis of cultural resources on the West Coast, including information on location of cultural resources within marine managed areas, and the degree to which they are protected by current management authorities.

- *Ecological Characterization* – The MPA Center is working with the NOAA's National Marine Sanctuary Program and the National Centers for Coastal and Ocean Science (NCCOS) to gather existing data on regional ecosystems on the West Coast. Products will describe the distribution and ecology of living marine resources in the coastal and marine environments of the West Coast. An ecologist was hired by NCCOS in August 2006 to begin this work at the Center's California office.

- *West Coast Regional MPA Government Partners Meeting* – In June 2006, the MPA Center and its federal partners, including the National Marine Sanctuary Program, NOAA Fisheries, and the National Centers for Coastal and Ocean Science, convened a two-day workshop in Monterey, California for federal, state and tribal government representatives. The purpose of the workshop was to create a shared understanding of the location, purpose and potential effects of current and planned place-based management in the region, and to craft a collaborative roadmap to enhance regional MPA planning and adaptive management activities. The workshop generated many ideas for moving the region toward a more cohesive approach. Next steps include developing an MPA working group of key governmental partners to help guide the initiative, and developing an action plan to lay out specific steps to

be taken to implement the vision of workshop participants.

- *MPA Governance Framework* – Understanding the existing governance framework of the region is critical to the West Coast Pilot Project. Each jurisdiction has distinct, and sometimes overlapping, authorities aimed at marine conservation. Understanding which agencies have authority over different activities in a given geographic area is key for successful place-based management and planning. A searchable database of all the authorities has been built, and will be populated and made available to all stakeholders. Database fields include management agencies, policies and links to the full text of these policies.

MPA FEDERAL ADVISORY COMMITTEE

The Marine Protected Areas Federal Advisory Committee (MPA FAC) is authorized by Executive Order 13158 to provide expert advice to the Departments of Commerce and the Interior on the implementation of the Order. It consists of individuals with diverse backgrounds and experience, who represent parties interested in the use and impact of MPAs as a management tool. The 30 Committee members are appointed by the Secretary of Commerce in consultation with the Secretary of the Interior, and represent a broad stakeholder community, including scientists, academia, commercial and recreational fishermen, other resource users, state and tribal resource managers, and environmentalists. In addition, nine federal agencies are represented by non-voting ex-officio members of the Committee (see Appendix B). The Committee is supported by the MPA Center.

In FY 2005-06, the MPA Federal Advisory Committee held meetings in Arlington, Virginia; Portland, Maine; and Corpus Christi, Texas. Key activities and accomplishments of the Committee included:

- Unanimously adopting their first set of recommendations to the Departments of Commerce and the Interior in June 2005. The MPA FAC's report, entitled *Protecting America's Marine Environment: A Report of the Marine Protected Areas Federal Advisory Committee on Establishing and Managing a National System of Marine Protected Areas* was delivered to the Under Secretary of Commerce for Oceans and Environment, and the Assistant Secretary of the Department of the Interior, and was broadly distributed to other interested parties. It was an important component of the broad input from many sources that contributed to the development of the *Draft Framework for Developing the National System of MPAs*.
- Establishing three new subcommittees to address the new charge received by the Committee from the Department of Commerce in April 2006. These subcommittees are addressing: 1) identifying regional priorities for conservation; 2) incentives and implementation for an effective national system of MPAs; and 3) MPA natural and social science.
- Incorporating input from a variety of panels and speakers, including the Coastal States Organization, tribal leaders, regional fishery management councils, sportfishing representatives, and natural and social scientists.
- Generating draft reports from each subcommittee that will be submitted to the full Committee for consideration.

The Committee has been charged with delivering its next work products to the Departments of Commerce and the Interior by October 2007.

INTERAGENCY MPA WORKING GROUP

The MPA Center has formed a working group to coordinate federal activities related to the Executive Order and to provide staff support to the federal agencies serving as ex officio members of the MPA Federal Advisory Committee. Agencies represented include Defense (Navy, Army Corps of Engineers), Interior, Commerce, Homeland Security (Coast Guard), Agency for International Development, State, Agriculture (USDA), and the Environmental Protection Agency (EPA) (See Appendix C).

The Interagency MPA Working Group met five times during FY2005 and three times during FY2006. A key focus was on soliciting input from federal agencies on aspects of the draft framework. Other issues included support for the MPA Federal Advisory Committee, coordination with the U.S. Ocean Action Plan's "Seamless Network" initiative, and coordinating international activities.

In January 2005, the MPA Center and the Interagency MPA Working group conducted a workshop for over 70 participants from ten federal agencies to garner input for the development of the national system of marine protected areas. The two-day workshop solicited federal agency input on the goals and objectives of the national system and approaches to field support. The workshop was attended by staff from across NOAA, the Department of the Interior, Fishery Management Councils, the Department of State, U.S. Agency for International Development, USDA, U.S. Coast Guard, EPA, and the Department of Defense. Participants provided feedback on the needs of MPA managers, and how a national system can help address marine conservation goals. The meeting was the first in a series of workshops held for federal agencies, states, and other stakeholders to provide input on the development of the national system.

SEAMLESS NETWORK

The development of the national system of MPAs and the creation of a "seamless network" are both working to enhance coordination among existing marine protected areas (MPAs) programs in the U.S. in order to improve their efficiency and effectiveness in protecting the nation's marine and cultural resources.

The U.S. Ocean Action Plan calls on National Parks, National Wildlife Refuges, National Marine Sanctuaries, and National Estuarine Research Reserves to "coordinate and better integrate the existing network of marine managed areas." Many of these sites overlap or lie adjacent to each other and have a history of collaboration that provides a model for this expanded network. Although these sites were created under separate agency authorities and statutory mandates, they are united by their proximity and similar science and management priorities. These actions to coordinate and better integrate are referred to as the "seamless network" initiative.

Key accomplishments under the seamless network initiative include:

- Signing and implementing a cooperative enforcement agreement between the National Wildlife Refuge System, National Park Service, National Marine Sanctuary Program and National Marine Fisheries Service;
- Organizing a workshop for 30 field staff from the four programs and the MPA Center in August 2005 to identify priority issues for field staff (*Laying the Foundation, Finding Common Ground: Crafting an Effective Interagency Collaboration: A National, Interagency Partnership of the National Park Service, the US Fish and Wildlife Service, the National Estuarine Research Reserves, and National Marine Sanctuary Program*); and
- Signing a general agreement in August 2006 that enables site-based, regional, and national collaborations among the partner agencies.

The complementary efforts of the seamless network and the national system are closely coordinated by NOAA and DOI. While the seamless network provides a mechanism for focused coordination among the four MPA systems on resource conservation issues of shared interest, the national system works with MPA programs at all levels of government and at ecosystem, regional, and national levels to improve coordinated MPA planning and effectiveness. Certain priorities are likely to be identified by both initiatives and can serve as the focus of larger, collaborative efforts. For example, certain research or monitoring needs are likely to be common across MPA programs. To address such needs, the national system can serve as a mechanism for the wider set of partners, such as state, territorial, tribal, local, and other federal government MPA programs and partners to work together. By contrast, the seamless network can serve as a mechanism for the four specified programs to establish working relationships at the site, regional and national level, to facilitate interagency communication and coordination among these programs, and to share knowledge, resources and staff consistent with these agencies' missions and mandates. In addition to marine areas, the seamless network includes the associated upland areas of parks, refuges and reserves, which are not currently included in the draft MPA criteria for the national system. Complementary upland conservation, research, and education activities of the seamless network can advance goals of the MPA System.

LOOKING AHEAD: FY2007-2008

Key activities to implement Executive Order 13158 over the coming two years include:

- Conducting the public comment period for the draft Framework document, responding to public comments and completing the final Framework document (by late FY2007);
- Establishing the initial national system of MPAs from existing federal, state and territorial sites that meet the criteria (by FY2008);
- Continuing to implement the West Coast Pilot Project with government partners to develop tools for enhanced MPA planning, management and coordination on the West Coast and potential application elsewhere;
- Continuing to work with the Marine Protected Areas Federal Advisory Committee, government partners and other stakeholders on the development and implementation of the national system;
- Continuing education and outreach through the MPA website (www.mpa.gov) and other mechanisms; and
- Continuing to enhance cooperation by MPA programs in the United States, Canada and Mexico through the North American MPA Network.

APPENDIX A.
AGENCY AND PROGRAM REPORTS

DEPARTMENT OF COMMERCE

National Marine Fisheries Service

Contact: Rafael V. Lopez, 301-713-4300 x136, Ralph.Lopez@noaa.gov

NOAA Fisheries Service establishes protected areas as one of several tools to conserve and manage living marine resources. Our mission is to rebuild and maintain sustainable fisheries, promote the recovery of threatened and endangered species, and protect and maintain the health of coastal and marine habitats. We provide stewardship of these resources for the benefit of the nation, supporting coastal communities that depend on them, and helping to provide safe and healthy seafood to consumers and recreational opportunities for the American public.

NOAA Fisheries Service is responsible for the conservation and management of living marine resources under various authorities, including the Magnuson-Stevens Fishery Conservation and Management Act (MSFCMA), the Endangered Species Act (ESA), the Marine Mammal Protection Act (MMPA), and the Atlantic Coastal Fisheries Cooperative Management Act. All NOAA Fisheries Service sites are located in state or Federal waters, between 0 and 200 miles off the coast of the United States. These sites have been established by Federal regulations in accordance with the specific authority and afford protection under one of four categories: *Federal Fisheries Management Zone, Federal Fisheries Habitat Conservation Zone, Federal Threatened/Endangered Species Protected Area, and Federal Marine Mammal Protected Area*.

The size and protections afforded to these sites can vary greatly depending on the objectives for which each was established. The majority are gear-restricted areas (i.e., areas prohibiting the use of one or more fishing gear types), although a few sites prohibit all fishing within their boundaries. In most cases sites represent areas that encompass important ecological or biological features or functions. Sites could also include particularly valuable habitats, such as coral reefs or other habitats essential to the life history of a particular managed species. Types of species protected include marine and anadromous fish, invertebrates, aquatic plants, marine mammals, and sea turtles.

Under the MSFCMA, eight Regional Fishery Management Councils develop resource management recommendations, which may include area-based management measures to meet specific objectives (e.g., preventing overfishing or habitat destruction; protecting spawning aggregations or juvenile nursery habitat; or allowing overfished stocks to rebuild). These areas may have restrictions on gear or limitations on the time of year when fishing is allowed. Similarly, the ESA provides for designation of "critical habitat" and the development of other protective measures for listed threatened and endangered species. Protecting listed species may be accomplished through regulations directly under the ESA, through the MMPA, or may be implemented through regulations in fishery management plans under the MSFCMA.

In FY 2005-2006 NOAA Fisheries Service continued its participation in efforts to implement the MPA Executive Order at both the national level and through its regional actions to carry out mandated responsibilities to further the conservation and management of marine resources. These activities included:

- Supporting MPA Center efforts in organizing and conducting three meetings of the MPA Federal Advisory Committee, and in the evaluation of candidates to fill vacancies on the Committee; serving on the Interagency MPA Working Group; and partnering with the MPA Center, other NOAA elements, and DOI counterparts in the development of the *Draft Framework for Developing the National System of Marine Protected Areas*;
- To implement a February 2005 recommendation from the North Pacific Fisheries Management Council, NOAA Fisheries Service announced in June 2006 a final rule for the closure of large areas

of the Alaskan sea floor to bottom-contacting fishing gear to protect sensitive habitats, establishing a network of fishing closures around the Aleutian Islands and in the Gulf of Alaska. One site, the Aleutian Islands Habitat Conservation Zone, is the largest marine managed area in the United States at over 279,000 square nautical miles, about the size of Texas and Colorado combined. Other areas protected include six Aleutian Islands Coral Habitat Protection Areas that include especially sensitive "coral gardens;" ten Gulf of Alaska Slope Habitat Conservation Areas along the continental slope to protect hard bottom important to rockfish; five Gulf of Alaska Coral Habitat Protection Areas to protect dense thickets of red tree corals; fifteen Alaska Seamount Habitat Protection Areas; and two sites in the Bowers Ridge Habitat Conservation Zone. In total, nearly 300,000 square nautical miles off Alaska representing relatively undisturbed habitat areas important for cold water corals and other sensitive features that are slow to recover once disturbed by fishing gear or other activities have been protected under the MSFMA *essential fish habitat* (EFH) provisions to help support sustainable fisheries into the future.

- The Gulf of Mexico Fishery Management Council recommended a generic fishery management plan amendment in March 2005 to address EFH requirements for each of the Council's seven plans: shrimp, red drum, reef fish, coastal migratory pelagic resources, coral and coral reefs, stone crab, and spiny lobster. The action proposed establishing three additional *habitat areas of particular concern* (HAPC), expanding current restrictions in areas adjacent to two existing HAPCs, and restricting fishing activities within HAPCs to protect EFH. NOAA Fisheries Service announced in December 2005 a final rule implementing the amendment for the five sites in the Gulf of Mexico. One established a marine reserve by prohibiting fishing for any species; the remainders prohibit various types of bottom fixed and mobile gears. All five HAPCs prohibit bottom anchoring by fishing vessels as well.

- In November 2005 the Pacific Fishery Management Council recommended amending the Pacific Coast Groundfish Fishery Management Plan to describe and protect EFH for these species. The amendment proposed measures to minimize adverse effects to EFH from fishing, including fishing gear restrictions and prohibitions, areas that are closed to bottom trawling, and areas that are closed to all fishing that contacts the bottom. NOAA Fisheries Service announced in May 2006 a final rule implementing Pacific Coast groundfish EFH, including restrictions on certain bottom trawl and dredge gears over broad areas defined as EFH and more-specific restrictions on bottom trawl and contact gears in fifty EFH Habitat Conservation Areas in the waters off Washington (five sites), Oregon (eleven sites), and California (thirty-four sites). The management measures resulted in the protection of 130,000 square miles of habitat, representing over 42 percent of the U.S. exclusive economic zone off the west coast. They provide habitat protection to areas that are essential to commercially valuable fish and are aimed at replenishing overfished stocks.

National Marine Protected Areas Center

Contact: Lauren Wenzel, (301) 713-3100 extension 136, Lauren.Wenzel@noaa.gov

The National Marine Protected Areas Center was established by Executive Order 13158 on MPAs to coordinate the development of an effective national system of MPAs in the U.S. by working with public and private partners. The MPA Center is located within the National Oceanic and Atmospheric Administration, and is directed to work cooperatively with the Department of the Interior and to consult with other federal, state and tribal agencies and stakeholder groups. The MPA Center's mission is to facilitate the effective use of science, technology, training, and information in the planning, management and evaluation of the nation's system of marine protected areas.

Key responsibilities of the MPA Center include:

- Coordinating with federal, state, and tribal agencies to develop and implement an effective national system of MPAs;

- Coordinating the West Coast Pilot Project, which will ultimately be expanded to other regions, to test the development of a regionally based MPA system, and to develop tools and mechanisms to enhance regional MPA planning and management;

- Producing, maintaining and analyzing an inventory of marine managed areas

- Supporting the MPA Federal Advisory Committee
- Conducting targeted research, assessment and analysis of natural and social science issues affecting MPAs; and
- Providing information on MPAs and the national system to a wide range of audiences through the www.mpa.gov website.

For FY2005-06, key accomplishments of the MPA Center included:

- Completing the *Draft Framework for Developing the National System of Marine Protected Areas*;
- Gathering input from diverse stakeholders for the Framework through dozens of meetings with stakeholders, including five public dialogue sessions; three regional state workshops; and one federal agency workshop;
- Working with 35 coastal states and federal agencies to gather data and conduct quality assurance/quality control for the marine managed area inventory, and completing the first initial analysis of inventory results;
- Launching the West Coast Pilot Project with federal, state and tribal partners to develop information and tools to enhance MPA planning and management on the West Coast;
- Holding three meetings of the MPA Federal Advisory Committee to advise NOAA and the Department of the Interior on the implementation of Executive Order 13158;
- Initiating the development of the North American MPA Network's "Baja to Bering" pilot MPA monitoring program in cooperation with the Commission for Environmental Cooperation in North America, Parks Canada, Mexico's Comision Nacional de Areas Naturales Protegidas and MPA programs of the three nations; and
- Redesigning and expanding the U.S. website on MPAs, http://www.mpa.gov, a comprehensive site with information on the inventory, Federal Advisory Committee, terminology, and other MPA Center activities.

For more detailed information on activities conducted by the MPA Center in FY05-06, visit http://www.mpa.gov.

National Estuarine Research Reserve System

Contact: Laurie McGilvray, (301) 713-3155 extension 158, Laurie.McGilvray@noaa.gov

Mission and Authority

The National Estuarine Research Reserve System is a network of 27 estuarine areas that are protected for long-term research and education. Established under section 315 of the Coastal Zone Management Act of 1972 as amended, the reserve system is a partnership between the National Oceanic and Atmospheric Administration (NOAA) and state agencies and universities. Reserve sites are nominated by the governor of a coastal state and designated by NOAA, and ongoing programs are implemented by state agencies and universities with support from NOAA. The National Estuarine Research Reserve System Strategic Plan (2005-2010) states that the mission of the reserve system is "to practice and promote coastal and estuarine stewardship through innovative research and education, using a system of protected areas." To this end, reserves implement locally relevant research, education, and resource stewardship programs as well as system-wide programs in coastal monitoring, research, and training for coastal decision makers.

FY 2005-2006 Activities Related to Coordination with Marine Protected Areas Center

As the NOAA partner for the National Estuarine Research Reserve System, the Estuarine Reserves Division collaborates with the MPA Center. In FY 2005 and 2006, highlights included:

- Estuarine Reserves Division personnel and National Estuarine Research Reserve System staff participated in several MPA Center meetings and regional workshops to provide input on the development of the *Draft Framework for Developing a National System of Marine Protected Areas*.
- Together, staff of the Estuarine Reserves Division and the MPA Center provided information about the MPA Executive Order, the work of the Federal Advisory Committee, and the MPA Center to reserve managers.
- Estuarine Reserves Division and National Estua-

rine Research Reserve System staff participated in the Government Partners meeting of the West Coast Pilot Project to provide a NERRS perspective on how federal, state and tribal partners can work together to enhance MPA planning and management on the West Coast through regional coordination and partnerships.

- The Wells Reserve in Maine and the newly designated Mission-Aransas Reserve in Texas both hosted the Marine Protected Areas Federal Advisory Committee on field trips, providing an opportunity for Committee members to learn about the reserves' missions, activities, and local coastal issues.
- NERRS is a partner in the "Seamless Network" initiative (see page 10).

National Marine Sanctuary Program

Contact: Brad Barr, (508) 457-2234, Brad.Barr@noaa.gov

Mission and Authority

The National Marine Sanctuary Program's (NMSP) strategic plan states that the mission of the program is to "identify, protect, conserve, and enhance the natural and cultural resources, values, and qualities of the National Marine Sanctuary System for this and future generations throughout the nation." The National Marine Sanctuary Act, the primary authority under which the National Marine Sanctuary System is managed, identifies the purpose of the program as "to identify and designate as national marine sanctuaries areas of the marine environment which are of special national significance and to manage these areas as the National Marine Sanctuary System" [Sec. 301(b)(1) of the National Marine Sanctuaries Act, Title 16, Chapter 32, Sections 1431 et seq. United States Code as amended by Public Law 106-513, November 2000]. The NMSP is also the primary management authority, with the U.S. Fish and Wildlife Service, and in close collaboration with the State of Hawaii, for the Northwestern Hawaiian Marine National Monument, designated by Presidential Proclamation 8031, dated June 15, 2006, under the authority of the Antiquities Act. The National Marine Sanctuary Program is the primary implementing agency designating and managing MPAs in the federal waters within the U.S. exclusive economic zone.

FY 2005-2006 NMSP Activities Related to Coordination with National Marine Protected Areas Center

The NMSP continues to coordinate with the National MPA Center regarding the implementation of EO13158. Below are highlights of the collaboration between National Marine Sanctuary Program and the MPA Center.

- The NMSP continues to provide, as needed, Sanctuary-related data and information in support of maintaining the marine managed areas inventory.
- The NMSP continues to work with MPA Center staff to develop and implement an efficient and effective National System Framework that provides added value to existing and extensive interagency MPA collaboration.
- The NMSP Maritime Heritage Program continues to coordinate with the MPA Center on issues related to preserving maritime heritage, including participation in the Federal agency workshop on data needs for cultural resource management, and included MPA Center staff in coordination with the Hudson River NERR and partners on shipwrecks in the Hudson River, NY.
- The NMSP contributed significantly to the development of the *Marine Managed Areas Boundary-Making Handbook* and participates in deliberations of the Integrating MPA and Fisheries Science Working Group.
- The NMSP participates in the Federal Interagency MPA Working Group, and has attended, as observers, a number of the MPA Federal Advisory Committee meetings.
- The NMSP is a key partner with the MPA Center in the West Coast Pilot Project.
- The NMSP convened the California Coastal Communicators Workshop, in which the MPA Center was a participant.
- The NMSP participated with the MPA Center in North American MPA Network (NAMPAN) sponsored projects, including the MPA Monitoring Initiative.
- The NMSP is a partner in the "Seamless Network" initiative (see page 10).

DEPARTMENT OF DEFENSE

Contacts:
Tom Egeland, Office of the Assistant Secretary of Navy (Installations & Environment), 703-614-1173, Tom.Egeland@Navy.mil
Elizabeth Phelps, Office of the Chief of Naval Operations (CNO N45), 703-604-5420, Elizabeth.Phelps@Navy.mil
Joseph Wilson, U.S. Army Corps of Engineers, South Atlantic Division, (202) 761-7697, joseph.r.wilson@HQ02.USACE.ARMY.MIL

Executive Order 13158 calls for collaboration amongst federal, state, local, and tribal governments to enhance the protection of United States ocean and coastal resources through an effective national system of marine protected areas (MPAs). The Department of Defense (DoD) stewardship and management efforts in the marine and near-shore environments are administered through numerous programs to ensure safe and environmentally responsible action in and around designated MPAs. DoD policies address environmental and natural resources protection through compliance with the National Environmental Policy Act (NEPA); Sikes Act; Clean Water Act (CWA); Executive Order 12114, *Environmental Effects Abroad of Major Federal Actions*; Rivers and Harbors Act; Endangered Species Act (ESA); Fish and Wildlife Conservation Act; Coastal Zone Management Act (CZMA); Marine Protection, Research, and Sanctuaries Act (MRPSA), including the Ocean Dumping Ban Act (ODBA); Act to Prevent Pollution from Ships; Marine Mammal Protection Act (MMPA); Magnuson-Stevens Fishery Conservation and Management Act; Coastal Barrier Resources Act; Oil Pollution Act; Comprehensive Environmental Response, Compensation, Liability Act (CERCLA); Executive Order 13112, *Invasive Species*; Executive Order 13089, *Coral Reef Protection*; as well as other related statutes and Executive Orders.

Military installations occur in numerous coastal locations throughout the United States, including U.S. territories such as American Samoa, Guam, the Northern Marianas Islands, and the U.S. Virgin Islands. In addition, at-sea training and testing operations are important exercises that maintain and enhance military readiness. DoD activities at its shore facilities and at sea are conducted with an awareness of and sensitivity to ocean and coastal resources including established MPAs. DoD aims to improve military readiness through balanced and environmentally responsible testing and training.

DoD responsibilities in the marine environment also extend to the proper disposal of dredged materials. The U.S. Army Corps of Engineers (ACOE) operates and maintains 108 ocean dredged material disposal sites within the U.S. coastal zone, including Alaska and Hawaii. The Nation's coastal harbors and navigation channels require this maintenance to sustain the economic, social, and environmental viability of the near-shore environment. DoD management efforts seek to dispose of uncontaminated dredged materials in a manner that protects and enhances marine ecosystems.

Because military lands and waters are often protected from human exploitation, they include some of the Nation's most significant natural resources. The Sikes Act, as amended in 1997, requires that military installations develop and implement Integrated Natural Resources Management Plans (INRMPs) to manage these assets. INRMPs provide for a comprehensive approach to ecosystem management by integrating natural resources management for land and water resources. The management of natural resources on an ecosystem basis prevents and reduces impacts to ocean and coastal resources, including those found in marine managed areas.

DoD is not an implementing agency under Executive Order 13158. Nonetheless, it has a role in the development and implementation of the MPA network. DoD, in particular the Navy, is at the vanguard of ocean and coastal research and technology development. For example, the Office of Naval Research (ONR) and the Naval Oceanographer/Navigator are involved in all aspects of ocean and coastal management and provide expertise in a multitude of disciplines with relevance to MPAs – oceanography, hydrography, geospatial information, marine biology, coastal geosciences, etc. Across DoD there are a number of subject matter experts (i.e., marine ecologists, oceanographers, policy analysts, etc.) that support marine resources management decisions. Ocean and coastal resources expertise within DoD ranges from high-level support (policy development, enforceable standards and regulations) to local level support (data collection and synthesis).

DoD continues to support the MPA Federal Advisory Committee and maintains membership in relevant National Marine Sanctuary Advisory Councils. In FY2005 and FY2006, the following DoD initiatives also contributed to the protection of marine resources:

Geographic Information Systems

- Protective Measures Assessment Protocol (PMAP) is a geographic-based software program designed to provide situational awareness and assist Commanders in implementing protective measures for unit level training and exercises conducted at-sea. Operators enter the coordinate location for a particular exercise and the software shows all identified protected resources, including site- and season-specific protective measures that must be applied, in the vicinity. The operation is then planned to avoid the area or incorporate the protective measures, as appropriate. PMAP includes the locations of U.S and foreign nationally recognized marine sanctuaries, national monuments, national wildlife refuges and other ocean and coastal resources.
- The Navy's Environmental Information Management System (EIMS) is a Web-based tool designed to provide planners and biologists with a single place to access authoritative data and applications to plan activities. Much of the data accessed via EIMS applications relates to the marine environment and is used for regulatory consultations to ensure that Fleet operations are conducted in compliance with the MMPA and other conservation legislation.

Research

- DoD-sponsored researchers from the University of Miami, Rosenstiel School of Marine and Atmospheric Science (RSMAS) have established and tested a new method for processing digital data collected using remote-operated vehicles (ROVs). The method is intended to provide rapid and inexpensive marine resource assessment using ROVs to collect digital data to be interpreted using computers, with less dive time required. Once proven, survey costs should be reduced permitting locations to conduct surveys more frequently.

Aircraft Carrier ex-ORISKANY Artificial Reef

- With the approval of the Environmental Protection Agency (EPA) and the State of Florida, the Navy sank the retired aircraft carrier ex-ORISKANY on 17 May 2006. The 880-foot carrier will provide for an artificial reef off the coast of Pensacola, Florida approximately 23 miles from the shoreline. The Florida Fish and Wildlife Conservation Commission will manage the new reef system.

Marine Resources Assessments and Surveys

- The Navy funded and participated in numerous baseline assessments and surveys of the marine and coastal environments of the Atlantic, Pacific, and Caribbean. These studies assessed and monitored threatened and endangered species, essential fish habitat, coral reef systems, and other components of the coastal and ocean environment under DoD management. Marine resources assessments and surveys contribute significantly to DoD efforts to keep INRMPs current, which, in turn helps to prevent and reduce impacts to the marine environment from land-based sources of pollution.

Compliance

- The Navy initiated the development of two programmatic environmental impact assessments (EISs) under the National Environmental Policy Act (NEPA) that will evaluate at-sea Naval operations along the Eastern U.S. shoreline and off the coast of Hawaii. MPAs will receive consideration as part of these evaluations.

Contact: LT Jeff Pearson, (202) 372-2188, Jeffrey.S.Pearson@uscg.mil

MPA Establishment, Protection and Management

As the nation's primary at sea law enforcement agency, the Coast Guard is a leader in helping the nation recover and maintain its marine protected species populations. The Coast Guard enforces a wide variety of regulations designed to protect vital marine ecosystems and the marine wildlife that depend on them including the Northern right whale, Kemp's Ridley sea turtle, Hawaiian monk seal, Steller sea lion, and a myriad of other threatened and endangered species. Typical efforts by Coast Guard vessels and aircraft include patrolling national marine sanctuaries and other protected areas, providing support to other agencies involved in disentanglement operations, and providing logistical support efforts to return rehabilitated animals to the wild. The Coast Guard works closely with federal, state and non-governmental agencies to help maintain a healthy, diverse and sustainable ocean environment.

Specific Accomplishments

- The Coast Guard maintained a designated representative for most of the National Marine Sanctuary Advisory Councils, ensuring agency visibility and responsiveness with respect to issues affecting the sanctuaries.
- Sector Los Angeles/Long Beach partnered with the Channel Islands National Marine Sanctuary and the Channel Islands National Park in a cooperative enforcement effort to support the "no take" Marine Protected Areas (MPA) within state waters, and surrounding the Channel Islands. Air Station Los Angeles/Long Beach, working with the National Park Service, conducted one to two Channel Islands MPA enforcement patrols per week.
- Coast Guard air and surface units operating near Alaska regularly enforced the Steller Sea Lion rookeries and "no transit zones," providing approximately 3,850 hours of surveillance. Air and surface units within Hawaii regularly enforced the Hawaiian Islands Humpback Whale National Marine Sanctuary regulations, providing approximately 1,500 hours of sanctuary surveillance. Additionally, surface and air units provided routine surveillance of the Monterey Bay, Channel Islands, and Olympic Coast National Marine Sanctuaries concurrent with other Coast Guard operations.
- The Thirteenth Coast Guard District implemented a Protected Living Marine Resource Program, which identifies and provides operational compliance and enforcement guidance to units regarding all critical habitat, National Marine Sanctuaries and National Wildlife Refuges located within their area of responsibility. Additionally, the Thirteenth Coast Guard District maintains a current Memorandum of Understanding (MOU) with the Olympic Coast National Marine Sanctuary (OCNMS). This MOU outlines procedures to be followed in support of the OCNMS, including encouraging routine enforcement, ensuring that the sanctuary manager is informed of Coast Guard operations occurring within the OCNMS boundaries and ensuring that Coast Guard activities are carried out in a manner that avoids, to the maximum extent practicable, any adverse impacts on OCNMS resources.
- In August 2006, the Coast Guard Pacific Area convened a Work Group with pertinent stakeholders to identify sensitive areas and concerns that might be impacted by at-sea operational readiness training. The Work Group updated operational guidance, and adjusted some operations and training programs to reduce and/or eliminate negative impacts on marine protected species and protected areas.
- In October 2005, the Coast Guard initiated an Environmental Impact Statement to assist in determining appropriate measures the Coast Guard could implement to improve the protection and conservation of marine protected

species and marine protected areas, while continuing to perform its missions within California, Oregon and Washington.

- Since 1998, units in the Fourteenth Coast Guard District have partnered with federal, state and local entities to remove marine debris from the waters of the Northwestern Hawaiian Islands. From August through September 2005, two USCG cutters assisted in the recovery of over 21,000 pounds of marine debris. From May through June 2006, the Fourteenth District conducted a joint marine debris recovery mission with NOAA Fisheries, Coral Reef Ecosystem Division, and U. S. Fish and Wildlife Service at Midway. During this mission, 2.9 tons of derelict fishing gear was removed from Midway's coral reef ecosystems and shorelines.
- The Coast Guard worked with partners via the Council on Environmental Quality throughout the designation process for the Northwestern Hawaiian Islands National Monument. Upon codification of the Monument's regulations, the Coast Guard promptly promulgated enforcement guidance to Coast Guard units to ensure they were capable and ready to enforce the Monument's provisions, protecting the world's largest marine conservation area.
- The First Coast Guard District continued implementation of its Memorandum of Agreement (MOA) with the Stellwagen Bank National Marine Sanctuary and NOAA Fisheries to increase coordination of sanctuary enforcement activities. The MOA also promotes research and data gathering, and protects the sanctuary by educating its potential users and the general public. Coast Guard provided periodic patrols, disseminated educational information to mariners, and provided research support. The Coast Guard provided Automated Information System data to the Sanctuary staff so that they could review vessel/whale co-locations. The effort resulted in a shift to the shipping lanes to reduce ship strikes of the critically endangered right whale.
- The Coast Guard dedicated 450 resource hours towards protection of the Oculina Bank Habitat Area of Particular Concern.
- The Coast Guard continued co-management of the Mandatory Ship Reporting System, which encompasses right whale critical habitat. The system informs commercial ships of 300 gross tons or greater of the recent locations of right whales and operating precautions in right whale high use areas.
- The Seventh and Eighth Coast Guard Districts actively patrolled for violations of their closed areas, such as the Madison Swanson Area (to protect grouper), the Texas Shrimp Closure area (to allow juvenile shrimp to mature), and the Red Hind Spawning Aggregation Area. Activities included detecting, deterring, and intercepting violations.

Marine Environmental Protection Standards

The Coast Guard developed national regulations and policies on marine environmental protection, and represented U. S. interests in the development of global marine environmental protection agreements to integrate U.S. and international environmental standards and public policy.

Education

The Sea Partners Campaign is the Coast Guard's marine environmental protection outreach and education program. Coast Guard staff were part of Sea Partners teams that operate from each of the 35 sectors and their subsidiary commands located in port communities around the nation, including Puerto Rico and Guam. The primary objective is to educate communities at large in developing awareness of marine pollution issues, and improving compliance with marine environmental protection laws and regulations. The Sea Partners Campaign education messages cover:

- Effects of oil, hazardous chemicals, waste and debris on the marine environment.
- How marine environmental protection laws and regulations apply to various marine users.
- Ways in which groups and individuals can take action to protect the marine environment.

The Sea Partners Campaign targets a wide range of audiences, including state, local and federal officials, merchant mariners, offshore industry personnel, ferry operators, recreational boaters, sport and commercial fishermen, seafood processors, local business owners, marina operators, students, scouts and teachers. The Sea Partners Campaign developed working

partnerships with the U.S. Environmental Protection Agency, the National Oceanic and Atmospheric Administration, the U.S. Fish and Wildlife Service, the Ocean Conservancy, the Marine Environmental Education Foundation and other agencies and organizations to expand outreach opportunities. Through the Sea Partners Campaign, the Coast Guard has been able to launch a public education and outreach program with the potential to make a substantial contribution to protecting the marine environment. In 2005-06, Sea Partners reached an audience of over 360,000 people.

DEPARTMENT OF THE INTERIOR

Minerals Management Service

Contact: Elizabeth Burkhard, (703) 787-1749, Elizabeth.Burkhard@mms.gov

The Minerals Management Service's responsibilities on the outer continental shelf are those of a resource manager, not a general land manager. The Outer Continental Shelf Lands Act (OCSLA) requires MMS to ensure the "protection of the human, marine, and coastal environments" in its decisions about where and when to conduct mineral leasing and in its regulation and oversight of industry operations. The Energy Policy Act of 2005 amended the OCSLA to give authority to DOI to coordinate the energy and non-energy related uses in areas of the OCS where traditional oil and natural gas development already occurs. In fulfilling these requirements, MMS scientists, engineers and inspectors establish and enforce substantial environmental protections for specific sites and biological communities in areas leased for mineral development.

For FY2005-2006, key activities for MMS included:

- Participation in MPA Center -sponsored meetings and activities;
- Working cooperatively with NOAA to support the MPA Center; and
- Monitoring industry activities to ensure that MMS environmental standards are met and that they are effective in protecting MPA resources.

National Park Service

Contact: Cliff McCreedy, (202) 513-7164, cliff_mccreedy@nps.gov

Marine resources in the National Park Service have grown to include more than three million acres of ocean and Great Lakes waters and 5,100 miles of coast. More than 57 million people visit the 40 Park units on the marine managed areas inventory to experience our nation's ocean heritage, including beaches, coral reefs, kelp forests, wetlands, glaciers, historic shipwrecks and other resources. The National Park Service is charged with conserving these natural and cultural resources unimpaired for the enjoyment of current and future generations.

The National Park Service is a partner in the "Seamless Network" initiative (see page 10).

Other FY2005-2006 accomplishments include:

NPS and USGS Respond to 2005 Caribbean Coral Bleaching Event

Through intensive monitoring, the NPS South Florida/Caribbean Inventory and Monitoring Network and USGS Caribbean Field Station were able to statistically quantify the scale and extent of impacts from the most severe coral bleaching event ever recorded at Virgin Islands National Park and Buck Island Reef National Monument. Many corals already weakened by bleaching suffered a "one-two punch" when attacked by disease. As a result, nearly 50% of live coral cover among major reef building species died at six sites. USGS and NPS also measured bleaching of elkhorn corals (*A.palmata*), a species recently listed as threatened under the Endangered Species Act (ESA), of which 50% bleached at monitoring sites on St. John. Long term monitoring efforts and microbial research will support investigations into bleaching and disease susceptibility and resistance, and contribute to

species protection plans under new rules for elkhorn and staghorn (*A.cervicornis*) corals under ESA.

Research and Monitoring Move Forward at Marine Reserves

In July 2006, the National Park Service (NPS) and U. S. Geological Survey (USGS) held an international workshop on St. John, U. S. Virgin Islands (USVI), to identify opportunities for future research and monitoring in new "no-take" marine reserves in Buck Island Reef National Monument, Virgin Islands Coral Reef National Monument and Dry Tortugas National Park. Workshop participants included NOAA Center for Coastal Monitoring and Assessment, and thirty scientists and managers from the United States, Mexico, the Bahamas, Belize, St. Lucia, Barbados, Colombia, and the British Virgin Islands. Many research questions were identified, including, for example: What are expectations for fisheries to rebound in light of pressures from fishing outside these reserves? Will marine reserves help reverse declines and restore ecosystem structure and function, in spite of stresses other than fishing? The USGS Eastern Region has pledged to commit over $300,000 per year in matching funds for competitive research projects to explore these and other questions at Dry Tortugas and the Virgin Islands parks.

NPS and Florida Concur on Marine Reserve in Dry Tortugas National Park

A 2005 agreement reaffirmed the critical partnership between the National Park Service and State of Florida in conserving Dry Tortugas National Park, and facilitated NPS implementation of the Dry Tortugas NP Research Natural Area (RNA). The RNA is a "no-take" marine reserve occupying 46% of the park, including much of the coral reef habitat (54% of park waters remain open to recreational fishing). On November 14, 2006 the State of Florida concurred with the NPS Final Rule to establish the RNA and implement other regulatory changes at the Park. The RNA is designed to restore and protect fish populations essential to the marine ecosystem, to maintain spawning and recruitment of regional fish stocks, and to protect coral reefs and other benthic habitats from anchor damage (anchoring is prohibited). The RNA complements the adjacent Tortugas Ecological Reserve managed by the Florida Keys National Marine Sanctuary and now comprises the largest marine reserve in North America. The Park Service will work closely with NOAA and the State of Florida in evaluating and monitoring the RNA.

Biscayne NP Fisheries Plan Moves Forward

The Park Service and the Florida Fish and Wildlife Conservation Commission have developed a proposed Draft Environmental Impact Statement for the joint fisheries management plan for Biscayne NP. The joint plan is the first of its kind in the National Park System to be based on quantifiable, desired conditions for restoring and maintaining fish stocks. The plan will transcend jurisdictional boundaries to reverse drastic declines in coral reef fish and shellfish in and around the park, and help to ensure future recreational opportunities. A working group of recreational anglers, commercial fishermen, scuba divers and conservation groups provided extensive input into designing the Plan.

Increasing Scientific Understanding of Ocean and Coastal Parks

The NPS Watershed Condition Assessment Program has completed scientific assessments of 16 coastal parks through the Natural Resource Challenge. These assessments are valuable tools for guiding resource management planning and development of resource monitoring plans. Multi-disciplinary teams integrate the physical and biological sciences with geospatial databases to characterize the health of coastal park resources, and reveal factors that may cause impairment, including pollution, watershed degradation, invasive species and extractive uses. NPS Water Resources Division has initiated assessments in 41 coastal and Great Lakes parks and plans to conduct assessments for 14 additional coastal parks.

Research Learning Centers (RLCs) Advance Cooperative Education and Research

NPS Research Learning Centers are galvanizing local organizations, schools, universities, government agencies and citizens to participate in park-based ocean research, education and volunteer projects. Eight coastal RLCs are engaging citizens in monitoring water quality and shellfish health, eradicating aquatic invasive species and other projects. Scientific studies leveraged by Centers provide critical information to assist the parks in managing ocean

and coastal resources. For example, students and volunteers experience the scientific process by conducting the Tomales Bay Biodiversity Inventory (TBBI) at the Pacific Coast Science and Learning Center. The Inventory has identified over 2,000 species, identified a new threat from a previously unknown invasive tunicate, and obtained millions of dollars in grants for protection and restoration of this important estuary at Point Reyes National Seashore, California.

Monitoring Threats to Resources and Integrating Science

NPS Inventory and Monitoring (I&M) Networks acquire and integrate scientific information to support conservation of ocean and coastal resources in the National Park System. Underwater habitats in many Parks have not yet been mapped and marine plant and animal communities are unknown or poorly understood. Acquiring these habitat maps and knowledge of the abundance and distribution of marine species will be essential to managing these resources. The parks and I&M Networks are developing Geographic Information System (GIS) maps and databases, taking inventories of species, and designing scientifically and statistically rigorous monitoring plans (Vital Signs) to track ecological conditions of coastal and ocean parks, working with U.S. Geological Survey, NOAA, state agencies and academic partners.

Upcoming initiatives for FY07:

Ocean Park Stewardship Action Plan

On Friday, December 1, 2006 National Park Service Director Mary Bomar announced the release of the Ocean Park Stewardship Action Plan at an event celebrating the 50th Anniversary of Virgin Islands National Park at St. John, USVI. The Ocean Park Stewardship Action Plan was drafted with input from the NPS National Leadership Council, Park Superintendents and various partners and released pursuant to President Bush's U.S. Ocean Action Plan. The Plan will prioritize agency activities and focus the organizational and scientific capacity of the Park Service on conserving marine, estuarine and Great Lakes resources in the National Park System, in collaboration with state and federal agencies and park stakeholders. A new ocean park web site is posted at http://www.nps.gov/pub_aff/oceans/conserve.htm

US Fish and Wildlife Service

Contact: Andrew G. Gude, (703) 358-2415, Andrew_Gude@fws.gov

The National Wildlife Refuge System (NWRS), administered through the U.S. Fish and Wildlife Service within the Department of Interior, includes the nation's largest system of lands managed for the benefit of wildlife both above and below water. The mission of the National Wildlife Refuge System is "to administer a national network of lands and waters for the conservation, management, and where appropriate, restoration of the fish, wildlife, and plant resources and their habitats within the United States for the benefit of present and future generations of Americans."

The National Wildlife Refuge System (NWRS) has 169 coastal, ocean, and Great Lakes refuge sites spanning from above the Arctic Circle to below the Equator. The system has significant coastal holdings with an estimated 30,000 coastal miles covering 20 million coastal acres, an estimated 7 million acres of submerged land, including almost three million acres in coral reef ecosystems, and some 300,000 acres in Congressionally-designated marine wilderness areas in 34 refuges. The NWRS coastal and marine protected area efforts are focused on increasing cooperative conservation approaches with federal, state, and private partners in developing approaches to common conservation goals, issues, and challenges.

The NWRS was established to mitigate the deleterious effects of commercial and recreational harvest of migratory and resident, fish and wildlife. This conservation paradigm may now be as appropriate in the broader ocean environment as it was over 100 years ago when applied in coastal areas. As the Refuge System advances by building capabilities for science-based ecosystem management by working with our many partners, so too shall the protections of our nation's coastal and marine resources.

The NWRS works with many valuable partners and stakeholders in managing its coastal and marine holdings, including, but not limited to the MPA Center, National Estuarine Research Reserves, National Park Service, US Geological Survey, National Marine Sanctuary Program, US Coast Guard, NOAA Fisheries, many non-governmental organizations, states, counties, and other local entities.

Some key activities for FY05-06 include:

Seamless Network

- The National Wildlife Refuge System is a partner in the "Seamless Network" initiative (see page 10).

U.S. Coral Reef Task Force (USCRTF)

- Initiated the Navassa Island NWR Cooperative Conservation strategy to obtain USCRTF members assistance in developing a strategy to address illegal fishing in the refuge.
- With other federal agencies, hosted a Caribbean and Pacific Federal Coral Reef Grants and Funding Opportunities Workshop which in part lent support to local MPA manager's capacity-building efforts.

Marine Managed Areas Inventory

- Entered data into the Marine Managed Areas Database for the qualifying 169 NWRs.

Mexico/Canada/USA Trilateral Ecosystem Conservation Table

- Coordinated and planned the multi-agency marine managed areas presentations for the yearly meeting and will work with partners to represent the US at the 2007 Trilateral meeting plenary session on marine issues.

Northwestern Hawaiian Islands Marine National Monument

- Working with State of Hawaii and NOAA partners to deliver products and establish monument co-management regime: monument regulations, public use and visitor services plans, monument co-management plan.

World Heritage Sites

- Working with federal agency, state, international, and private partners toward potential World Heritage Site status for six of nine remote Pacific Islands NWRs and for two NWRs as part of the Northwestern Hawaiian Islands Marine National Monument.

Marine Debris

- Working with federal, state, territorial, and private partners across the continental US, Alaska, Hawaii, remote Pacific Islands and insular territories on large and small scale marine debris cleanup efforts.

Palmyra Atoll NWR Research Consortium

- Working with The Nature Conservancy in managing this NWR as a natural laboratory for a private academic research institution's scientific staff.

MPA Research

- Working with private and federal agency partners (in particular NOAA) in facilitating conducting research a pristine NWRs located in the Caribbean, Hawaiian, and remote Pacific areas.

DEPARTMENT OF STATE

Contact: Alexandra Curtis, (202) 647-5808, curtisKA@state.gov

The State Department's Offices of Oceans Affairs and Marine Conservation are responsible for developing and coordinating international MPA policy, particularly as it relates to the high seas. This issue arises regularly in a variety of multilateral fora the State Department covers, including the United Nations (UN) Open-Ended Informal Consultative Process on Oceans and the Law of the Sea, the UN Food and Agriculture Organization's Committee on Fisheries, and the IUCN World Conservation Congress. The Office of Oceans Affairs also attended the first meeting of the UN Ad Hoc Open-ended Informal Working Group on biodiversity in areas beyond national jurisdiction in February 2006, as well as the Eighth Conference of the Parties to the Convention on Biological Diversity in March 2006, both of which included discussion of high seas MPAs. Finally, the State Department was involved in the interagency process for establishing the Northwestern Hawaiian Islands Marine National Monument.

NATIONAL SCIENCE FOUNDATION

Contact: Roxanne Nikolaus, (703) 292-7578, rnikolau@nsf.gov

The National Science Foundation (NSF) is an independent agency of the U.S. government responsible for promoting progress in science and engineering by fostering new ideas and research opportunities and supporting projects in basic scientific research, engineering and education. NSF plays a critical role in supporting fundamental research, education and infrastructure at colleges, universities and other organizations across the country. Specifically, the Division of Ocean Sciences supports basic research and education to further understanding of the global oceans, from coasts to the deep sea, and their interactions with the earth and atmosphere.

Most of the research proposals sent to NSF are unsolicited and peer-reviewed in competition with other proposals addressing similar disciplinary activities. NSF's broad support for basic research provides opportunities for discovery in many fields, including those that may inform the design, efficacy, placement, and management of MPAs and help address other considerations as put forth in Executive Order 13158.

NSF continues to support projects encompassing basic research and education that also help provide answers to applied questions and build scientific capacity. These projects result in a better understanding of biological and oceanographic processes influencing marine populations. NSF funds a diverse portfolio of projects directly or indirectly linked to MPAs. Funding spans the full range of marine ecosystems and includes deep-sea environments, intertidal and shallow benthic habitats, kelp forests, and coral reefs.

Numerous projects with relevance to MPAs employ a wide range of techniques with novel biochemical, geochemical and biomolecular markers to explore the mechanisms of connectivity within and between populations of marine organisms. For example, in FY 2005-06 NSF initiated support to: 1) develop imaging systems to identify fish larvae in their natural environment; 2) incorporate state of the art measurements of the chemistry of fish otoliths to identify the very unique chemical signature of the river, estuary or coastal region where they were spawned; and 3) launch population connectivity studies utilizing molecular genetic markers such as microsatellites. NSF also funded a number of interdisciplinary groups that will develop innovative solutions to complicated problems requiring both field experimentation and modeling such as the sources, fates and timing of the dispersal of fish larvae under a variety of oceanic current regimes. Additionally, NSF has supported workshops to bring physical oceanographers, molecular

biologists and larval fish biologists together to discuss the best approaches to understanding the connectivity between marine populations and its application to the MPA decision making process.

In addition, current (FY2005-06) NSF-funded interdisciplinary projects on deep sea hydrothermal vents include the exploration of connectivity between vent systems via long distance larval dispersal. These studies emphasize the role of deep sea currents, vent plumes and topographical features in the deep sea that affect larval dispersal and the establishment and maintenance of these unique ecosystems. Both modern deep sea oceanography and molecular biology are being used to understand these processes and their potential applicability to MPA design in the deep sea.

Such NSF-supported studies contribute to the science needed to serve in the use, selection, spatial array, and management of MPAs. With the emphasis on quantitatively understanding the mechanisms by which MPAs enhance marine populations, research supported by NSF will continue in coming years to support additional efforts to examine the latest questions related to population connectivity of marine organisms and its role in MPA design.

U.S. ENVIRONMENTAL PROTECTION AGENCY

Contact: Brian D. Melzian, (401) 782-3188, Melzian.Brian@epa.gov

Three major statutes form the legal basis for programs managed and conducted by the U.S. Environmental Protection Agency (EPA) that relate directly or indirectly to MPAs. Namely, the Clean Water Act; the Marine Protection, Research and Sanctuaries Act (also known as the Ocean Dumping Act); and the National Environmental Policy Act. Below is a brief description of EPA's activities related to these statutes.

Marine & Ocean Discharges; and Ocean Discharge Criteria

Under Section 312 of the Clean Water Act, the Vessel Sewage Discharge Program provides for designation of No-Discharge Zones. States can request EPA to issue a regulation to establish No-Discharge Zones if they are needed to protect environmentally sensitive areas such as shellfish beds, coral reefs, or fish spawning areas.

Clean Water Act Section 301(h), added in 1977, allows publicly owned treatment works that discharge to marine waters to apply for a waiver of the Act's Secondary Treatment requirements, provided they can show that their discharge will not adversely affect the marine environment, including MPAs.

Under Clean Water Act Section 402, any discharge of a pollutant from a point source (e.g., a municipal or industrial facility) to the navigable waters of the United States or beyond must obtain a National Pollutant Discharge Elimination System (NPDES) permit, which requires compliance with Technology and Water Quality-Based Treatment Standards. A NPDES permit allows a facility to discharge a specified amount of a pollutant into a receiving water body under certain conditions. In addition to the individual NPDES discharge permits, there are general NPDES permits that cover offshore oil and gas exploration and production facilities, seafood processors, and storm water discharges.

Any discharge to the territorial seas or beyond must also comply with the ocean discharge criteria established under Section 403 of the Clean Water Act. These criteria specifically address impacts from such discharges on marine resources. Section 403 provides for additional protection of ocean waters (i.e., waters of the territorial seas, the contiguous zone, and the high seas beyond the contiguous zone) from point source discharges. Under Section 403(a), EPA or an authorized state may not issue a permit for a discharge into ocean waters unless the discharge complies with the guidelines (ocean discharge criteria) established under Section 403(c). These guidelines provide a level of protection in addition to the technology or water-quality based requirements applicable to discharges into inland waters, and are intended to protect the marine environment.

Ocean Dumping

The Marine Protection, Research, and Sanctuaries Act (MPRSA), also known as the Ocean Dumping Act, prohibits the dumping of materials into the ocean that would unreasonably degrade or endanger human health or the marine environment. The MPRSA implements the requirements of the London Convention, the international treaty governing ocean dumping.

Under the MPRSA, transportation for the purposes of dumping in ocean waters requires a permit from EPA or, in the case of dredged materials, from the U.S. Army Corps of Engineers (subject to EPA's concurrence). EPA is also responsible for designating recommended ocean dumping sites for all types of materials. Virtually all material disposed in the ocean in the United States today is dredged material (sediments) removed from the bottom of water bodies in order to maintain navigation channels and berthing areas. Other materials that are currently ocean disposed include fish wastes, human remains (e.g., ashes), and vessels. Certain materials, such as high-level radioactive waste, medical waste, sewage sludge, and industrial waste, may not be dumped in the ocean.

Cruise Ships' Sewage and Graywater Standards Development

In 2000, Congress enacted Title XIV, "Certain Alaskan Cruise Ship Operations" as part of the appropriations act for the Departments of Labor, Health and Human Services, and Education (33 U.S.C. 1901 Note). This law regulates the discharge of sewage and graywater from cruise ships authorized to carry 500 or more passengers for hire when operating in the waters of the Alexander Archipelago; and the navigable waters within the State of Alaska and within the Kachemak Bay National Estuarine Research Reserve. Before this law was passed, there was considerable concern about cruise ships discharging untreated sewage and graywater into areas that were surrounded by Alaskan waters but were beyond three miles from shore. In these areas, known as "doughnut holes," the discharge of sewage was unregulated. Title XIV sets requirements for discharges of sewage and graywater into Alaskan waters and the doughnut holes; and authorizes EPA to also develop regulations.

To implement Title XIV, EPA is currently assessing the need for additional standards for discharges of sewage and graywater from cruise ships operating in Alaskan waters. If changes to the standards currently in Title XIV are necessary, EPA expects to propose these regulations by the end of 2007. In addition, Title XIV requires the U.S. Coast Guard to inspect all discharge control equipment on covered cruise ships operating in Alaskan Waters; and requires sampling and testing of sewage and graywater discharges from covered cruise ships in Alaskan waters.

National Estuary Program

EPA's National Estuary Program was established by Congress in 1987 to improve the quality of estuaries of national importance. Section 320 of the Clean Water Act directs EPA to develop plans for attaining or maintaining water quality in an estuary. This includes protection of public water supplies and the protection and propagation of a balanced, indigenous population of shellfish, fish, and wildlife, and allows recreational activities, in and on the water. It also requires the control of point and nonpoint sources of pollution to supplement existing controls of pollution. In several cases, more than one State is participating in a National Estuary Program. Each program establishes a Comprehensive Conservation and Management Plan to meet the goals of Section 320.

Nonpoint Source Pollution Monitoring and Control

Congress amended the Clean Water Act (CWA) in 1987 to establish the Section 319 Nonpoint Source Management Program because it recognized the need for greater federal leadership to help focus State and local nonpoint source efforts. Under Section 319, State, Territories, and Indian Tribes receive grant money which support a wide variety of activities including technical assistance, financial assistance, education, training, technology transfer, demonstration projects, and monitoring to assess the success of specific nonpoint source implementation projects.

National Environmental Policy Act (NEPA)

Title I of NEPA contains a Declaration of National Environmental Policy which requires the federal government to use all practicable means to create and maintain conditions under which man and nature can exist in productive harmony. Section 102 requires federal agencies to incorporate environmental considerations in their planning and decision-making through a systematic interdisciplinary approach.

Specifically, all federal agencies, including the U.S. EPA, are to prepare detailed statements assessing the environmental impact of and alternatives to major federal actions significantly affecting the environment. These statements are commonly referred to as Environmental Impact Statements (EISs). Section 102 also requires federal agencies to lend appropriate support to initiatives and programs designed to anticipate and prevent a decline in the quality of mankind's world environment, including the marine environment where MPAs may be found.

U.S. EPA's FY 2005 & 2006 Accomplishments:

- Represented EPA during the Marine Protected Areas Federal Advisory Committee (MPA FAC) Meetings held in Arlington, Virginia (February 15-17, 2005); Portland, Maine (May 17-19, 2005); and Corpus Christ, Texas (April 24-26, 2006);
- Reviewed and provided detailed comments and recommendations to NOAA and the MPA FAC during the development of the MPA FAC Report entitled *Protecting America's Environment: Establishing and Managing a National System of Marine Protected Areas* (June, 2005);
- Reviewed and provided detailed comments and recommendations to NOAA during the development of the U.S. Government's Report entitled *Draft Framework for Developing the National System of Marine Protected Areas* (July, 2006);
- Represented EPA and actively participated in the NOAA sponsored Federal Agency Workshop entitled *Developing a National System of MPAs* held in Washington, DC on January 26-27, 2006;
- Assisted NOAA's MPA Center in locating a Federal Conference Room in Seattle, Washington so that the MPA Center's Staff could meet with Tribal Members of the Northwest Indian Fisheries Commission on April 12, 2006;
- Provided scientific and technical support to the MPA FAC; NOAA's MPA Center, and the Federal Interagency MPA Working Group;
- Continued the ongoing process to facilitate interactions between the MPA FAC and MPA Center with the Ocean.US Executive Committee (EXCOM) regarding the development of the U.S. Integrated Ocean Observing System (IOOS), and the National System of Marine Protected Areas; and
- The U.S. EPA will continue to actively support the activities of the MPA FAC, the MPA Center, and the Federal Interagency MPA Working Group as we strive to develop a National System of Marine Protected Areas.

APPENDIX B.
MPA FEDERAL ADVISORY COMMITTEE MEMBERS
FY2005-2006

CHAIR AND VICE CHAIR:

Dr. Daniel Bromley, Dept of Agricultural & Applied Economics, U. of Wisconsin (Chair)

Dr. Bonnie McCay, Dept of Human Ecology, Rutgers University (Vice Chair)

MEMBERS:

Dr. Tundi Agardy, Sound Seas (MD)

Charles Beeker, Underwater Science, Indiana University (IN)

Robert Bendick, The Nature Conservancy, Southeast Division (FL)

David Benton, commercial fishing (AK)

Dr. Anthony Chatwin, The Nature Conservancy (VA)

Dr. Michael Cruickshank, Marine Minerals Technology Center Associates (HI)

Ms. Carol Dinkins, Vinson & Elkins (TX) (until 6/05)

Dr. Rod Fujita, Environmental Defense (CA) (until 7/05)

Dr. Dolores Garza, University of Alaska Sea Grant (AK) (until 3/06)

Eric Gilman, Blue Ocean Institute (HI)

Ellen Goethel, fishing and ocean education (NH)

Dr. John Halsey, Michigan Department of History, Arts and Libraries (MI)

Dr. Dennis Heinemann, The Ocean Conservancy (DC)

Dr. Mark Hixon, Dept of Zoology, Oregon State University (OR)

George Lapointe, Maine Department of Marine Resources (ME)

Mr. Mel Moon, Quileute Tribe (WA) (until 5/05)

Mr. Robert Moran, American Petroleum Institute (DC) (until 4/06)

Dr. Steven Murray, College of Natural Sciences and Mathematics, California State University, Fullerton (CA)

Mr. Michael Nussman, American Sportfishing Institute (VA) (until 3/06)

Dr. John Ogden, Florida Institute of Oceanography, University of South Florida (FL)

Terry O'Halloran, tourism industry (HI)

Lelei Peau, American Samoa Department of Commerce (AS)

Dr. Walter Pereyra, Arctic Storm Management Group, Inc. (WA)

Max Peterson, International Association of Fish and Wildlife Agencies (retired) (VA)

Gil Radonski, sport fishing (NC)

Dr. James Ray, Oceanic Environmental Solutions, LLC (TX)

Mr. Andrew Sansom, River Systems Institute (TX) (until 8/06)

Ms. Barbara Stevenson, commercial fishing (ME) (until 9/05)

Dr. Daniel Suman, Marine Affairs and Policy, University of Miami (FL)

Mr. Ted Thompson, International Council of Cruise Lines (until 4/05)

Kay Williams, Gulf of Mexico Fishery Management Council (MS)

Jim Woods, Makah Tribe (WA)

Robert Zales II, recreational fishing (FL)

FEDERAL EX-OFFICIO REPRESENTATIVES:

Department of Agriculture

TBD

Department of Commerce

Mary Glackin, Assistant Administrator for Program Planning and Integration, NOAA

Department of Defense/Navy

Donald Schregardus, Deputy Assistant Secretary for Environment

Department of Defense/U.S. Army Corps of Engineers

Joseph Wilson, South Atlantic Division

Department of the Interior

Kameran Onley, Assistant Deputy Secretary

Department of State

Margaret Hayes, Director of Ocean Affairs

Department of Homeland Security

Rear Admiral Wayne Justice, Assistant Commandant for Response

Environmental Protection Agency

Dr. Brian Melzian, Oceanographer/Project Officer

National Science Foundation

Roxanne Nikolaus, Staff Associate, Division of Ocean Sciences

U.S. Agency for International Development

Jacqueline Schafer, Deputy Assistant Administrator, Bureau for Economic Growth, Agriculture & Trade

APPENDIX C.
INTERAGENCY MPA WORKING GROUP MEMBERS

Chair: Joseph Uravitch, Director, National Marine Protected Areas Center

Commerce/NOAA

Brian Jordan, Cultural Resources Coordinator, National Marine Protected Areas Center

Jonathan Kelsey, National System Coordinator, National Marine Protected Areas Center

Dana Topousis, Communications Manager, National Marine Protected Areas Center

Charles Wahle, Director, Science Institute, National Marine Protected Areas Center

Lauren Wenzel, Federal Agency Coordinator, National Marine Protected Areas Center

Ralph Lopez, NOAA Fisheries

Laurie McGilvray, Director, Estuarine Reserves Division

Brad Barr, Senior Policy Advisor, National Marine Sanctuaries Program

Mitchell Tartt, National Marine Sanctuaries Program

Defense

Thomas A. Egeland, Director, Environmental Planning and Conservation Policy
Office of the Assistant Secretary of the Navy (Installations and Environment)

Elizabeth Phelps, Marine Scientist, Chief of Naval Operations

Joseph Wilson, South Atlantic Division, U.S. Army Corps of Engineers

Environmental Protection Agency

Brian Melzian, Atlantic Ecology Division, National Health and Environmental Effects Research Laboratory

Homeland Security

LT Jeff Pearson, Commandant (CG3-RPL-4), U.S. Coast Guard Headquarters

Interior

Randal Bowman, Office of the Assistant Secretary, Parks and Fish and Wildlife

Elizabeth Burkhard, Minerals Management Service

Gary E. Davis, Visiting Chief Scientist, Ocean Programs, National Park Service

Cliff McCreedy, Natural Resource Stewardship and Science, National Park Service

Andrew G. Gude, Refuge Marine Programs, US Fish and Wildlife Service

National Science Foundation

Roxanne Nikolaus, Division of Ocean Sciences

State

Margaret F. Hayes, Director of the Office of Oceans Affairs
Bureau of Oceans and International Environmental and Scientific Affairs

Faith Kearns, AAAS Diplomacy Fellow

Alex Curtis, Bureau of Oceans and International Environmental and Scientific Affairs

USAID

Barbara Best, Coastal Resources and Policy Advisor

Bureau for Economic Growth, Agriculture & Trade

Agriculture

Merlin Bartz, Natural Resources and the Environment

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National Oceanic and Atmospheric Administration, National Marine Protected Areas Center, Silver Spring, Maryland